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Depression in partner caregivers of people with neurological conditions; associations with self-compassion and quality of life

Abstract

Objectives: Informal caregivers are vulnerable to poor mental health and quality of life (QoL). Self-compassion may protect against this. This study investigated depression and QoL in partner caregivers of people with a long-term or neurological condition (e.g. dementia or spinal cord injury) and explored the extent to which QoL and self-compassion are predictive of depression.

Design: A cross-sectional, questionnaire design.

Methods: Participants were recruited from charities and support groups. Partner caregivers ($N = 57$) completed assessments of depression, QoL, and self-compassion.

Results: Over half (61.8%) of caregivers experienced at least mild symptoms of depression, illustrating high prevalence among caregivers compared with the general population. Overall QoL was poor compared with non-caregivers. QoL was poorest in the physical domain ($M = 51.9$, $SD = 10.1$) and highest in the environmental domain ($M = 64.9$, $SD = 15.8$). Both self-compassion and QoL were significant predictors of depression ($p < .05$), explaining 48.8% of the variance. Hours spent providing care was also significantly predictive of depression ($p < .05$).

Conclusion: Self-compassion and QoL may be important targets for supportive interventions for this population. This study underscores the importance of developing supportive interventions for informal partner caregivers, and developing self-compassion in these.

Keywords: compassion; health promotion; caregiver burden; mindfulness; compassion

Introduction

Gradual advances in medical technologies have resulted in people with neurological conditions living longer and requiring care and support of varied degrees over their lifespan. The increase in the frequency of chronic illnesses, specialist care needs, and expensive rates of institutional care have forced over six thousand family members to take up the role of caregiving each year in the UK (Talley & Crews, 2007), indicating that this is an important population to study and support.

The term ‘caregiver’ refers to an individual who has the responsibility of attending to the day to day needs required for the adequate and comfortable living of another person (Greenwood & Smith, 2015). There is a distinct and clear difference between ‘formal and ‘informal’ caregivers. Formal caregivers receive payment for the services they provide as a caregiver and are required to possess a level of training in care to carry out the role. Informal caregivers are often family members, in this instance spouses, who provide care for their partner in their home and without any pay. Given the lack of training and reimbursement for their care, partner caregivers encounter a host of challenges in their role as a primary caregiver.

From the time of injury or diagnosis of illness, caregivers often find it difficult to accept the diagnosis and often make adjustments in the marital or romantic relationship to accommodate their new role as caregiver (Vitaliano, Zhang & Scanlan, 2003). Further, partner caregivers often experience role overload, lack of education on the illness and the care needs of the recipient, and financial strain due to decreased income (Vitaliano, Zhang & Scanlan, 2003). Such caregiving commitments often involve prolonged hours fulfilling the care-recipient’s needs and poor physical and mental health (Tommis, Robinson, Seddon, Woods, Perry & Russell, 2009; Legg, Weir, Langhorne, Smith & Stott, 2013). These can then impede QoL (Farina et al., 2017), thereby highlighting the need to provide adequate support to this group of people and to maintain their own QoL.

Due to the increased demands of caring for someone with a long-term condition, partner caregivers may often ignore their own well-being to avoid feelings of guilt and inadequacy in their role as caregiver (Martin, Gilbert, McEwan & Irons, 2006). Compassion, which has origins based on Buddhist teachings, is an important and fundamental element of the care sector (Wollenburg, 2004), and has the potential to relieve a person's suffering (Kret, 2011). The Dalai Lama (2003, p. 125) explains that:

'For someone to develop genuine compassion towards others, first he or she must have a basis upon which to cultivate compassion, and that basis is the ability to connect to one's own feelings and to care for one's own welfare... Caring for others requires caring for oneself'.

This indicates that compassion towards others can only come best when one demonstrates self-compassion. There are three primary facets which make up self-compassion (Neff, 2003); *self-kindness*, *common humanity*, and *mindfulness*. *Self-kindness* entails being warm and understanding to oneself instead of ignoring pain or punishing oneself with self-criticism. *Common humanity* is the ability to recognize that suffering and personal inadequacy are part of the shared human experience. Lastly, *mindfulness* is about adopting a non-judgemental receptive mind state whereby an individual observes thoughts and feelings as they are. High levels of self-compassion in individuals have been associated with greater psychological well-being and QoL (Neff, 2009). Therefore, encouraging self-compassion in carers will likely aid in promoting positive outcomes on the psychological and mental wellbeing of caregivers as well as those they care for.

The evidence outlined above suggests that maintaining self-care and self-compassion is likely to be of benefit to the general population, and perhaps even more important for those in caregiving roles. This study therefore aimed to explore the QoL of partner caregivers of people with chronic and neurological conditions, and to begin to explore the role that self-compassion might play in managing the wellbeing of this population.

Methods

Participants

Participants were recruited via carers support groups and through online platforms. Inclusion criteria were: aged 18 years or above (no upper age limit), primary caregiver of a spouse/partner with a chronic and/or neurological illness, assists with most (if not all) of the partner's daily care needs. Caregivers who sought medical attention three months prior to participating in the study, living with a chronic condition before or after the onset of the caregiving role, or showing any cognitive deficit were excluded from this study due to the impact that these could have on QoL. Population norm scores from existing literature (Skevington, Lofty & O'Connell, 2003) were used as a comparison group.

Measures

World Health Organization Quality of Life (WHOQoL-BREF; World Health Organisation, 1998): This 26-item questionnaire measures QoL in four domains (physical health, psychological health, social relationships and environment), graded on a five-point Likert scale. Summed scores range from 0 to 100 with higher scores indicating greater perceived QoL. Cronbach's alpha for the WHOQoL-BREF in the present study was $\alpha = .79$.

Patient Health Questionnaire (PHQ-9; Kroenke, 2001): Participants rate nine items on a Likert scale ranging from 0 (not at all) to 3 (nearly every day) the extent to which they have experienced mood-related problems within the last 2 weeks. The PHQ-9 incorporates DSM-IV depression criteria and is used as a screening and diagnosis tool, which can also differentiate the severity of depression in individuals with a depressive disorder. In the current study, reliability was good ($\alpha = .88$).

Self-Compassion Scale Short Form (SCS-SF; Raes et al., 2010): This 12-item tool measures self-compassion in six subscales: self-kindness, self-judgement, common humanity,

isolation, mindfulness and over-identification. The SCS demonstrated strong reliability in the present study ($\alpha = .90$).

Procedure

Data were collected using electronic and/or paper survey questionnaire. Eligible participants were approached with study information via charities and online carers' forums. The study was described and those indicating interest in the study were provided with detailed information. If they consented to taking part, participants were asked to complete a consent form, and the questionnaires.

Analysis

Data collected were analysed using SPSS version 24. Variables were checked for accuracy in entry and for missing data. Two main techniques were used to handle missing data; imputation method and listwise deletion which is the default in SPSS statistical packages. With the imputation method, each missing value was substituted with the mean score and analysis was carried out as if there were no missing values in the data. WHOQOL-BREF raw scores were transformed to a 0-100 scale in line with the stipulated guidelines (WHOQOL-BREF Group, 1998). This allowed the scores to be directly comparable with population norm scores from existing literature (Skevington, Lofty & O'Connell, 2004). The level of significance for all analyses was set to less than or equal to .05.

Independent-sample t-tests and Pearson's correlation analyses tests were carried out to explore differences between the caregiver sample and population norms on outcome measures. A linear regression was run to explore the extent to which depression could be predicted by self-compassion and QoL.

Ethical Considerations

The study was approved by the University of Buckingham School of Science and Medicine Ethics Committee (SSMEC), reference number M34T317. Prior to completing the survey, participants provided consent. Data collection was anonymous, and information provided by participants was non-identifiable.

Results

Demographic Characteristics of Caregivers

A total of 57 participants were recruited. Data from $n = 2$ respondents was excluded from the analysis as they were not spouses/partners of the care-recipient. Participants were mostly white British/Caucasian (78.2%) women (74.5%) with a mean age of 58.2 years ($SD = 25.5$). Participants were mostly married (74.5%), and had been in their current relationships for an average of 25.6 years. Less than 50% were in full- (20.0%), or part-time work (27.3%). Participants spent an average of four hours per day at work, and an average of 8.9 hours providing care (an average of 62.3 hours per week). Further details can be found in table 1.

Demographic Characteristics of Care-Recipients

Caregivers were mostly providing care to people with SCI (20%) and Alzheimer's & Dementia (20%). However, 32.7% ($N = 18$) of the caregivers cared for spouses experiencing less common and less represented chronic illnesses (these are shown in table 2).

INSERT TABLE 1 HERE

INSERT TABLE 2 HERE

Prevalence of Depression

Over half of caregivers experienced at least mild symptoms of depression. Table 3 shows the distribution of PHQ-9 scores according to depression symptom severity. The mean PHQ-9 score was 7.91 ($SD = 6.33$). The larger proportion of carers (68.3%) had minimal to mild levels of depression and 18 caregivers (32.7%) had moderate to severe levels of depression.

INSERT TABLE 3 HERE

Quality of Life

QoL scores are presented in table 4. Caregivers scores on the WHOQOL-BREF were lower than those of non-caregivers in the UK general population (Skevington, Lofty& O'Connell, 2004). Table 4 presents the results of independent samples t -tests, which indicated that scores on all domains were significantly lower in the present sample compared with population norms of previous work ($p < .001$).

INSERT TABLE 4 HERE

Relationships Between Demographics, Depression, QoL, and Self-Compassion

Spearman correlations were run to explore relationships between variables (see supplementary information). These indicated that age was significantly positively correlated with hours spent providing care ($p < .05$), and negatively correlated with hours spent at work ($p < .01$). Hours spent at work was negatively correlated with hours spent providing care ($p < .05$), and positively correlated with PHQ-9 scores ($p < .01$). All domains and total QoL were negatively correlated with depression severity ($p < .01$) and self-compassion was positively correlated with all QoL domains except physical QoL ($p < .05$). Self-compassion was also significantly and negatively correlated with PHQ-9 scores ($p < .01$).

181 ***Regression***

182 A linear regression was run to predict depression from self-compassion and QoL. The overall
183 regression indicated that the model was a good fit for the data ($F(2, 49) = 23.350, p < .001, R^2$
184 $= .488$), predicting 48.8% of the variance. Both self-compassion ($t = -4.133, p < .001$), and
185 QoL significantly added to the prediction ($t = -3.003, p = .004$).

186 Given the strong correlation, a multiple regression was run to predict depression from
187 between hours spent providing care. The overall regression indicated a good fit for the data
188 ($F(1, 52) = 10.961, p < .05, R^2 = .174$), predicting 17.4% of the variance.

Discussion

The purpose of this study was to investigate the relationships between depression, QoL, and self-compassion in partner caregivers of people with long-term and neurological conditions. Central to this study, over half of caregivers met the diagnostic criteria for depression, with a third of participants demonstrating moderate to severe depression. Similarly, QoL was much lower in all domains for partner caregivers in comparison to the general population. These findings support existing literature on the high prevalence of mental health related illnesses and poorer QoL in the caregiver population (Thomas, Saunders, Roland & Paddison, 2015). Further findings indicated that hours spent providing care, lower QoL, and lower self-compassion were predictive of higher rates of depression.

Time spent caregiving is shown to be associated with depression in vast bodies of work (Covinsky et al., 2003), and recent work has demonstrated that this relationship is mediated by This association was mediated by losses of time for other activities, income, and sense of community (Hilbrecht et al., 2015), each of which were likely in the present study given the high rates of unemployment and daily time spent providing care. Whilst participant reports of time spent caregiving likely reflect the high demand of caring for someone with a long-term or neurological condition, it is possible that those exhibiting more severe depression perceived themselves to be spending more time providing care. Further work is therefore required to establish the direction of this relationship.

In addition to time spent caregiving, both QoL and self-compassion were also predictors of depression, explaining almost half of the variance. This is perhaps unsurprising, given the large effect observed for the relationship between compassion and mental health (MacBeth & Gumley, 2012). Further, self-compassion is shown to be a better predictor of depression symptom severity than mindfulness (Van Dam, Sheppard, Forsyth, & Earleywine, 2010), and yet interventions focused primarily on improving self-compassion remain scarce. This

evidence reinforces that self-compassion is a robust and important factor in psychological wellbeing and QoL of partner caregivers. Indeed, self-compassion promotes positive health-behaviours such as seeking medical help when needed (Terry & Leary, 2011) and engaging in exercise (Magnus, Kowalski & McHugh, 2010), both of which are likely to improve both depression and QoL. Individuals who have the ability to extend compassionate care to themselves are able to recover and bounce back from stressors at a faster rate compared to people with lower self-compassion (Figley, 2002; Leary et al., 2007). This highlights the importance of developing self-compassion interventions for this high-risk group so as to support them in increasing resilience to the demands of caregiving.

Clinical Implications

Developing a culture of self-compassion in partner caregivers of individuals with chronic illnesses after diagnosis could potentially minimize their risk of suffering from mental health related disorders and improve their QoL. Attempts have already been made to study interventions with the aim to improve self-compassion, such as through the use of mindfulness-based interventions, which have demonstrated reductions in stress and anxiety, and increases in self-compassion (Shapiro, Brown & Biegel, 2007). Further, investment in support groups and respite services for informal carers could further enhance self-compassion. Indeed, such groups cultivate a sense of common humanity, which is central to self-compassion (Neff, 2011), and promote an environment where carers can receive support and companionship from people with whom they share experiences.

Limitations and Future Research

Whilst the study provides unique insight into the potential role of self-compassion in the QoL and psychological wellbeing of caregivers of people with long-term conditions, there are some

limitations to consider. The current study presents results from a small cross-section of mostly female partner caregivers which limits the extent to which conclusions can be generalised and causality inferred. The largely female sample likely represents the under-representation of male carers in research and/or caregiving. There is urgent need to explore mental well-being and QoL in the male carer population to explore the extent of variance in experiences and support requirements.

Long-term follow-up research that also considers the length of the caregiver role should be prioritised. Exploration of the impact of length of caregiving and the effects of fluctuations in care needs on depression, QoL and self-compassion would be of value to identify the precise timings when partner caregivers are likely to require more or less support. Moreover, detailed information on the care-recipients pertaining to the type of long-term neurological condition and the length of time they had been receiving care from their partner would provide more insight on the relationship this has on quality of life, depression and self-compassion. Further, qualitative investigations into the lived experiences of partner caregivers, and particularly exploring how caregivers enact self-compassion and its role in their lives, will add in-depth value to our understanding of this unique situation and its impacts.

Conclusions

The results of the present study serve to signpost researchers and clinicians towards potential factors that may influence the health and wellbeing of partner caregivers. Indeed, developing self-compassion in partner caregivers may help to improve outcomes for both the caregiver and the care recipient, by potentially mitigating the impact of the caregiving role.

Conflict of interest

The authors declare no conflicts of interest.

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344

345 Table 1. Sociodemographic characteristics of caregivers.

		<u>M</u>	<u>SD</u>
Age		58.24	25.5
Hours (a day) spent at work		4	4.77
Hours (a day) spent caring		8.90	6.40
		<u>N</u>	<u>%</u>
Gender	Male	14	25.5
	Female	41	74.5
Marital Status	Married	41	74.5
	In a relationship	9	16.4
	In a civil partnership	2	3.6
	Other	3	5.5
	Length of marriage/relationship (years)	25.62	13.55
Employment Status	Employed F/T	11	20
	Employed P/T	15	27.3
	Unemployed, looking for work	1	29.1
	Unemployed, NOT looking for work	10	1.8
	Retired	16	18.2
	Disabled, not able to work	2	3.6
Ethnicity	Asian/British Asian	4	7.3
	Black/African/Caribbean/Black British	3	5.5
	White British/Caucasian	43	78.2
	Mixed/Multiple ethnic groups	3	5.5

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348 Table 2. Frequency of chronic illnesses in care-recipients.

		<i>N</i>	<i>%</i>
Chronic/Neurological illness	Spinal Cord Injury	11	20
	Alzheimer's & Dementia	11	20
	Cancer	6	10.9
	Multiple Sclerosis	8	14.5
	Other	18	32.7

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351 Table 3. Distribution of PHQ-9 scores according to Depression Diagnosis Status (N = 55)

Level of Depression Severity, PHQ-9 Score	<i>N</i> (%)
Minimal, 0-4	21 (39.18)
Mild, 5-9	16 (29.09)
Moderate, 10-14	8 (14.55)
Moderately Severe, 15-19	7 (12.73)
Severe, 20-27	3 (5.45)

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355 Table 4. QoL Domain scores of caregivers and non-caregivers from UK population.

	Population Norms (Hawthorne, Herrman, & Murphy; <i>N</i> = 866)		Caregivers (current study, <i>N</i> = 55)		<i>p</i> -value	95% CI (lower, upper)
QoL Domains	<u><i>M</i></u>	<u><i>SD</i></u>	<u><i>M</i></u>	<u><i>SD</i></u>		
Physical	73.5	18.1	51.9	10.1	< .001	16.76, 26.44
Psychological	70.6	14.0	53.5	9.1	< .001	13.34, 20.86
Social	71.5	18.2	56.4	17.6	< .001	10.14, 20.06
Environment	75.1	13.0	64.9	15.8	< .001	6.60, 13.80

356 n.b. percentages rounded to 1 decimal place.

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